3 DISCUSSION AND RECOMMENDATIONS

3.1 STUDY APPROACH AND METHODOLOGY

3.1.1 Requirements and Workcenter Familiarization. Immediately after standup in July 2002, the Most Efficient Organization (MEO) Team submitted a Request for Information (RFI) for the following data necessary to better understand the existing "as is" environment under study: (1) historical temporary duty (TDY) data, (2) historical training data, (3) historical civilian overtime data, (4) current equipment lists, (5) current vehicle lists, (6) current days and hours of operation, (7) Unit Manpower Document (UMD), (8) current assigned strength, (9) current organization charts, (10) current position descriptions, (11) process analysis information from any previous (non-competitive sourcing) efforts, (12) current Host Tenant Support Agreements (HTSA) and Inter-Service Support Agreements (ISSA), (13) a list of current contracts for functions under study regardless of whether the services would be offered as government-furnished, and (14) a list of other contracts the functions under study may interface with. In addition to requesting the aforementioned data, and prior to release of the draft Performance Requirements Document (PRD) in November 2002, the MEO Team conducted workcenter interviews to familiarize themselves with the organizations under study, to include their mission, organization structure, customer base, responsibilities, job duties, workload, facilities, equipment, tools, use of support contractors, and primary publications. To supplement these interviews, to the extent they were available, the MEO Team also reviewed and analyzed the Air Force Manpower Standards (AFMS) Process Oriented Descriptions (POD) to better understand the current organization work processes. The requested data, interviews, and POD reviews provided the MEO Team with a full understanding of the "as is" environment and permitted completion of Part 2 of this Management Plan.

3.1.2 Operational Audit. Functional staffing, which includes determining full-time equivalents (FTE), skill levels, and job series was determined by the performance of an Operational Audit (OA) for most functions. In some cases, such as workcenters requiring coverage regardless of workload (e.g. 24X7), the OA would not provide adequate man-hours. In those cases, the minimum manning equation described in paragraph 3.1.3 was used to determine staffing.

Commencing with the draft PRD released in November 2002, followed by the formal Request for Proposal (RFP) and PRD in March 2003 and subsequent amendments, the OA was used to measure the direct workload for each PRD workload requirement (indirect workload appearing in the PRD was not measured since it is captured and accounted for in the Standard Indirect Allowable Man-Hours (SIAM) described in paragraph 3.1.4). Direct workload is that productive

work directly relating to a workcenter producing the end products of the PRD requirements in direct support of the mission. The measured "as is" data (time per occurrence) was based on technical estimates provided by workcenter personnel and by MEO Team functional area experts and reflects the staffing necessary to perform the PRD direct workload requirements prior to any process improvements and organizational changes. Adjustments were then made to the measured "as is" data to reflect "to be" reduced times per occurrence or PRD direct workload reduction/elimination brought about by the process improvement initiatives described in paragraph 3.1.6.

The adequacy of the OA results is tied directly to the accuracy of the PRD workload and, toward that end, based on the Requirements and Workcenter Familiarization efforts described above and the functional expertise of the MEO Team, over one hundred RFIs were submitted identifying incorrect, missing, and ambiguous PRD workload estimates. To the extent these issues were resolved in the formal RFP/PRD and subsequent amendments, the OA captured the changed workload.

3.1.3 Minimum Manning. As indicated above, some workcenters did not lend themselves to an OA. This was primarily the case in workcenters with 24X7 or similar coverage where it is necessary to meet mission critical response times regardless of the actual workload. In these instances, a minimum manpower equation was used to determine baseline manpower requirements. A minimum manpower equation converts required days per week, hours per day, and FTEs per shift, into monthly man-hours, which are then divided by the man-hour availability factor (MAF). For each of these workcenters, the use of overtime and on-call personnel was evaluated as an alternative to full-time staffing. As with the workcenters using OA, consolidation, multi-skilling, and cross-utilization were also considered.

3.1.4 Standard Indirect Allowable Man-hours. After completion of both the "as is" and "to be" OA discussed above, which measured direct workload, the MEO Team measured indirect workload in order to fully and accurately account for all work performed. Indirect work defines productive work that must be done, but that does not directly relate to producing an end product, and unlike direct work, it does not directly support the mission. The AFMS 00AA, "Standard Indirect Description" was used as a guide to derive the SIAM. This AFMS provides a Standardized Indirect Description (SID) and standardized indirect task times. Because the MEO will be an all-civilian workforce, the SIDs related to military personnel, as well as those SIDs not related to the functions under study were eliminated. The SIAM takes into consideration that fewer indirect man-hours would be required in an all-civilian workforce.

Measured man-hours, in both the "as is" and "to be" OA data, were then mapped to the current "as is" and new "to be" functional elements where the work was being and will be performed. The total monthly man-hours (combined direct and indirect) for each element were then divided by a man-hour availability factor of 148 hours (Office of Management and Budget (OMB) directed man-hours per year divided by 12 months, 1776/12) to derive the direct fractional manpower for each element.

Examples of indirect tasks include answering phones, filing, workspace clean-up, equipment maintenance, inventories, meetings, and supervision (these examples are not intended to be all-inclusive, only to give a general example of the types of tasks considered indirect). The SIAM accounts for daily as well as sporadic tasks. Sporadic indirect tasks are those that occur irregularly and may take a considerable length of time to complete, e.g., the annual appraisal cycle and conducting inventories, etc. This serves the same purpose as workload leveling. That is, we staff to a workload average, ignoring the daily or weekly fluctuations and temporary spikes that naturally occur.

In determining the SIAMs, one typical administrative type and one typical maintenance type workcenter were analyzed from the current "as is" and new "to be" organization. The resulting SIAM factors (the difference in rates are attributed to closer and more direct supervision, equipment that must be maintained, and increased clean-up time for maintenance-type workcenters) were then weighted based on the number of administrative and maintenance positions to derive a single weighted SIAM factor which was then applied to the respective OA data to derive the recommended staffing for the "as is" environment without any process improvement and to the "to be" organization to reflect incorporation of process improvements and organizational changes into the MEO.

In addition, a modified SIAM (supervisory duties only) was calculated to determine the fractional manpower equivalent associated with alignment of the MEO under the 81CS/CC.

3.1.5 Process Failures, Modes and Effects Analysis. Using the in-depth understanding of the "as is" environment gained through the Requirements and Workcenter Familiarization described above, the functional expertise of the MEO Team, and the requirements of the RFP/PRD, the MEO Team performed an extensive Process Failures, Modes and Effects Analysis (pFMEA) to identify and analyze critical problems that existed in the "as is" environment and to brainstorm solutions for the MEO. The pFMEA model, which served as a "spring board" for the Process Improvement Initiatives described below, is a widely known and recognized process improvement tool employed by the manufacturing sector, primarily the automotive industry in its

QS-9000 initiative. The method, however, is versatile and has gained considerable acceptance in service and non-manufacturing sectors.

During workshops, a cross-functional team of MEO personnel familiar with the functional areas and associated problems, analyzed each key PRD requirement and associated processes against the following dimensions:

- **Failure Mode** – Also referred to as the root cause of the problem effect.

- **Effect** – The impact on the customer (internal or external) if the problem escapes detection or preventive methods.

- **Occurrence (O)** – On a scale of 1 (rarely) to 10 (frequently), how often does the failure occur? For purposes of this pFMEA, the MEO Team used the following rating system (based upon statistical benchmarks used in industry):

  - Very High (9, 10): Process failure occurs once every two or three times

  - High (7, 8): Process failure occurs once every eight to 20 times

  - Moderate (4, 5, 6): Process failure occurs once every 80 to 2,000 times

  - Low (2, 3): Process failure occurs once every 15,000 to 150,000 times

  - Minor (1): Process failure occurs less than once every 1,500,000 times

- **Severity (S)** – On a scale of 1 (least) to 10 (most), how severe is the effect on the customer? For purposes of this pFMEA, the MEO Team used the following rating system:

  - Very High (9, 10): Customer is at serious health, safety, or regulatory compliance risk

  - High (7, 8): High degree of customer dissatisfaction

  - Moderate (4, 5, 6): Customer is uncomfortable or annoyed

  - Low (2, 3): Customer is slightly annoyed

  - Minor (1): Customer probably won't notice

- **Detectability (D)** - On a scale of 1 (least) to 10 (most), how readily is the failure detected and resolved prior to leaving the functional area? For purposes of this pFMEA, the MEO Team used the following rating system:

- Non-Detection (9, 10): No controls in place

- Low (7, 8): Existing controls probably won't detect the failure

- Moderate (4, 5, 6): Existing controls may detect the failure

- High (2, 3): Existing controls have a good chance of detecting the failure

- Very High (1): Existing controls always detect the failure

Next, the MEO Team analyzed each failure in terms of relative significance. The Risk Priority Number (RPN) is the product of O, S, and D. The RPN will, as a result, lie between 1 and 1,000, with the higher values signifying a greater degree of severity. The MEO Team, per industry guidelines, did not attempt to set a baseline score for RPN severity. Rather, the MEO Team utilized the "golf score" concept, in that the lower the RPN, the better. In addition, failure modes with high "S" scores were also scrutinized closely, regardless of their final RPN. Finally, with each failure mode assessment the MEO Team functional area experts proposed one or more process improvements. The results of the pFMEA served as a "path forward" by identifying feasible process improvements addressed under Process Improvement Initiatives below.

3.1.6 Process Improvement Initiatives. The MEO Team conducted a number of internal process improvement workshops with the overall goal of identifying and implementing improvement initiatives, to include the identification and incorporation of benchmarking (to identify potential areas for improvement and/or validate process improvement initiatives), that will result in efficient (cost) and effective (quality) performance. The workshop objectives were to qualify, quantify, and document proposed improvements that will mitigate barriers generated from the pFMEA analysis described above using Take Action Matrices, Take Action Plans, and To-Be OA Worksheets.

The Take Action Matrix tool assisted the MEO Team in making appropriate decisions on which proposed improvements to pursue to eliminate or minimize barriers. The matrix identifies the relationship between the failure mode (problem), its effect(s), and proposed improvement solutions. The matrix also identifies the methods necessary for implementing the proposed improvements. These methods were evaluated and rated by scoring its "Effectiveness" and "Feasibility" using the scale: 1-None, 2-Slight, 3-Moderate, 4-Very, 5-Extreme. The proposed improvements with the highest overall method scores (Effectiveness X Feasibility) indicated a highly probable solution to the barrier for further evaluation using the Take Action Plan.

The Take Action Plan tool used by the MEO Team ensures successful implementation of proposed improvements. It documents accountability (What, How, Who, and When), identifies resources needed, and communicates to all MEO Team members what proposed improvements will be implemented to minimize improvement duplication.

Once proposed improvements were documented using the Take Action Matrix and Take Action Plan, the resource savings (i.e., decreased time per occurrence, decrease or elimination of workload, etc.) were documented using To-Be OA Worksheets, which are modified versions of the "as is" OA data described above. Using these worksheets, the MEO Team documented the impact of proposed improvements against the "as is" measured direct staffing to aid in determining final direct FTE requirements.

As part of these process improvement initiatives, the current organization was analyzed extensively to determine whether it still served its purpose and more importantly, whether it was structured to allow for continuous change and improvement to meet the requirements of the RFP/PRD. Perceived redundancies and inefficiencies in the current organization were surfaced as part of the aforementioned workshops and to the maximum extent possible, eliminated in the development of the MEO. This included the elimination of multiple layers of supervision (i.e., increasing span of control), consistent with National Performance Review initiatives, and a greater reliance on work (or team) leaders.

3.1.7 Overtime/Differential Pay, Other Entitlements and Travel. Overtime is addressed specifically in WINCOMPARE by position. The use of overtime was used to cover regularly occurring and sporadic workload for GS and FWS employees. Other Pay includes premium pay that does not earn fringe benefits other than Medicare. Other Pay includes night differential for GS/FWS employees, overtime, holiday, and the IDEA annual award allotment. Travel for historical training and conferences listed in the technical library were accounted for in WINCOMPARE.

3.1.8 Contracts. The "as is" environment relies extensively on contractor support to meet mission requirements. With very few exceptions, these contracted services were not offered up as government-furnished requiring the MEO to perform them in-house or utilize MEO subcontracts. The MEO Team decided early in the process that unless there was a compelling reason not to utilize and cost an existing contract (i.e., history of quality or price problems) it would continue to utilize the contractor support identified in the RFP Section J, Attachment 7, *Mobilization and Transition Plan* (i.e., MEO subcontracts) as part of its strategy given that they are all commercial in nature and price fairness and reasonableness has already been determined through competition

or some other form of price and/or cost analysis. The MEO Team analyzed all of the
aforementioned existing contracts to ensure performance requirements, quality, and pricing were
consistent with the requirements of the RFP/PRD. In addition, the MEO Team recognized and
accounted for the quality assurance responsibilities inherent in the use of these subcontracts as
part of its quality control program set forth in Attachment 9, *Quality Control Plan*.

3.1.9 Summary. The MEO, as reflected in this Management Plan, current through Amendment
15 of the PRD is the result of many changes, both organizational and procedural. In order to
successfully implement these changes, paradigms must shift.   Some processes will move to other
workcenters where they can be handled more efficiently. As expected, the major changes took
place in the most resource intensive areas. Since labor is by far the largest portion of an MEO's
cost, much effort was focused on reducing manpower requirements. Processes that were
considered "broken" were also heavily examined as discussed under pFMEA and Process
Improvement Initiatives.

Because of the improvements made by the MEO Team, the total overall reduction of 98 positions
will allow Keesler AFB to accomplish its mission more effectively, both in terms of cost and
performance.

3.2 MOST EFFICIENT ORGANIZATION (MEO)

3.2.1 Projects Support (SC1)

**3.2.1.1 Barriers to Efficient and Effective Operations in the Current Organization and
Proposed Improvements**

Barrier	Improvement
Barriers to efficient and effective operations include excessive layers of management that frustrates the processes causing delays, wasted and misdirected manpower, and customer confusion as to who is responsible for what, which results in customer run-around. The "networks" side of the house consists of numerous 3-level trainees, performing a multitude of tasks in addition to upgrade training. One workcenter had as many as twelve 3-levels at any given time.	Minimize/streamline managerial levels. Supervisors in the workcenters that comprise the new SC1 will be reduced from two supervisors to one. In addition, the staffing of the MEO with a fully qualified, stable civilian workforce will eliminate the non-productivity associated with apprentice-level positions.
AF Form 3215, *IT/NSS Requirements Document* processing is divided between too many offices and workcenters making tracking and solutioning difficult and time consuming. This causes delays and inefficiencies for the	Since AF Form 3215 processing is difficult and time consuming, AFWay will be used to procure.

Barrier	Improvement
customer.	
Some functions, such as base software license manager and Automated Data Processing Equipment (ADPE) positions are rotated frequently as a result of the ACE Lt program. Personnel are currently rotated without becoming fully proficient or having the opportunity to improve efficiencies. ACE Lt program and Airman upgrade training bog-down the process.	Positions will be filled by permanent civil service employees.
Receiving process for ADPE Custodian hampered by mismatched tracking numbers between vendor and ADPE shipment documents. There is no way to match shipment to customer.	Implement AFWay, which will ensure numbers are correctly matched.
Contracting and the Communications Squadron are producing prices quotes, which is a duplication of effort.	There should be only one approval authority. If AFWay is used, contracting will not need to research costs because they will know AFWay is a valid source.

3.2.1.2 Mission Statement. Provide a multitude of innovative communication functions including hardware and software asset management, multimedia services, publications and forms management, systems engineering, and plans and implementation services to the 81st Training Wing and customers.

3.2.1.3 Responsibilities.

- Manage the Project Support Flight.

- Serve as the principle focal point for performing office administrative, secretarial, and budgeting duties in support of the MEO utilizing office programs and software such as databases, spreadsheets, and graphics.

- Manage Communications and Information Technology (C&IT) programs and projects in the planning, acquisition, and control of resources. Coordinates with Systems Telecommunications Engineering Manager – Base Level (STEM-B) and 38th Engineering and Installation Group (EIG).

- Manage, track, and receive all government owned and leased hardware, firmware, software, warranty records, and licenses.

- Monitor the Multimedia contract.

- Create, analyze, design, produce, revise, standardize, disseminate, and maintain all Keesler AFB and Air Force forms and publications.

3.2.1.4 Organization Chart. See Attachment 5, *MEO Organization Charts*.

3.2.1.5 Concept of Operations.

3.2.1.5.1 Normal Operations

MEO Chief will report directly to the 81CS/CC. The MEO Chief will possess a comprehensive understanding of every task in the PRD and will complement the other key staff members. The MEO Chief will enforce the provisions set down in the PRD and will negotiate modifications on behalf of the MEO. The section supervisors serve as working supervisors providing guidance to the workers and reports directly to the MEO Chief. With this structure in place, each worker will have the freedom to innovate, try new ideas, and solve problems at their level with the full support of management. The MEO Chief and section supervisors are delegated the authority to obligate manpower, materials, funds, and make decisions on the efficient mobilization and utilization of resources to satisfy customer communications requirements.   The MEO Chief will be responsible for ensuring the MEO adheres to the Quality Control Program as depicted in Attachment 9, *Quality Control Plan*. In the absence of the MEO Chief the position will be filled by the supervisor of Network Operations.

Administrative Support serves as the principle focal point for performing office administration, secretarial, and budgeting functions in support of the MEO utilizing office programs and software such as databases, spreadsheets, and graphics.   Presently, most administration functions are spread throughout the squadron; three secretaries perform administrative support in the current organization. Under the MEO there will be one secretary and one budget technician, both with office automation clerk duties. Centralizing administrative duties will require fewer personnel and increase efficiency. The administrative responsibilities include, maintaining the employee roster, tracking suitability investigations, the safety program, Pass & ID, mail delivery points, records management (RM) program, reporting requirements, physical security, alarm system testing (i.e., fire drills), the Innovative Development through Employee Awareness (IDEA) program, training, and day-to-day taskings. To ensure record continuity throughout the MEO, an administrative support person will oversee administrative functions relative to the workcenters such as facility management, Operating Instructions (OI), controlled area entry, resource protection, and key/combination control.

Plans and Implementation provides detailed plans and supporting budgets that outline implementation activities to maintain infrastructure related to C&IT systems in response to the changing mission of Keesler AFB. Planners will keep pace with changing technologies. To accomplish these goals, the planner will work hand-in-hand with the STEM-B to ensure proposed technical solutions meet customer requirements, provide configuration management by participation in the planning, acquisition, management, and control of C&IT resources, and provide input to strategic planning processes to promote the most cost-effective technology options for operations improvements.

Plans and Implementation will schedule, forecast, document, and implement downward directed and upward driven C&IT programs and projects. Furthermore, they will provide project management services for all downward directed or upward driven airfield systems projects. Project management starts from inception of the project until the system is accepted, commissioned, and turned over to the using activity.

Plans and Implementation will maintain current and accurate drawings (i.e. blueprints, facility drawings, layouts, etc.) for all C&IT systems at Keesler AFB. In addition, they will maintain Geographically Separated Units (GSUs) within the scope of their support. Agreements, coordinate with 38th EIG and STEM-B to ensure master documents are updated, and obtain working copies of C&IT drawings for all completed projects and verify accuracy with appropriate agencies.

Currently the operation consists of one civilian who oversees four to five military personnel. Efficiency will improve because the manning will be reduced to three highly qualified and versatile plans programmers who will streamline the processes. Streamlining will include the use of AFWay, technological advancements, and workforce continuity. Furthermore, Plans and Implementation is responsible for CATV procurement including taking in requirements, obtaining cost estimates, budgeting for future requirements, and coordinating installations for official service. The 81st Communications Squadron Resource Advisor (which is not under study) will still be responsible for paying the monthly CATV bills.

Hardware and Software Asset Management in the current organization includes the ADPE program, base software license management, and the duties involved in processing all formal requests for computer/network related equipment and systems base wide. Eight personnel, six military and two civilians, currently perform asset management duties. The bulk of the work involves documenting, processing, and solutioning the AF Form 3215, *IT/NSS Requirements Document*. This is not an automated process and requires the paperwork to be routed through

several workcenters prior to approval/ disapproval. Airmen are frequently rotated in/out of
positions performing this function. The equipment receiving process also makes up a large
portion of Asset Management duties and is further complicated by the lack of adequate shelving
in the warehouse. A Second Lieutenant manages the entire 3215 process and usually performs
this duty for approximately six to 12 months and then rotates to another position as part of the
Ace Lieutenant program. The Lieutenant also manages the Personal Computer - Common
Operating Environment (PC-COE) for the base. This function involves ensuring all personal
computers (PC) for Keesler are installed and contain properly licensed software, including
determining how many licenses are required, and refreshing software suites as requirements
change.

The MEO will implement several changes to streamline these processes. First, AFWay is an Air
Force mandated program designed to streamline the ADPE, 3215 and PC-COE processes. The
quotation below is from their Web site user's manual:

> *"AFWay enables you to order information technology (IT) hardware and
> software, and obtain the necessary approvals for your purchase while sitting at
> your desk. AFWay provides a secure, efficient and convenient online shopping
> experience. Everything you need is available, literally, at the click of a button."*

AFWay clearly defines the roles and responsibilities of all agencies involved. The current
solutioning process may involve the expertise of several workcenters, each currently using their
own methods for equipment and pricing. AFWay not only automates the process but also
provides the Web tool for solutioning all 3215s. The solutioner inputs data and AFWay provides
the authorized computer/network equipment/systems and/or software available for order. All
computer and networking hardware and software will be ordered, shipped, and tracked via
AFWay. The AFWay workflow process and narrative description of the steps is depicted in the
TPP.

Personnel assigned to Asset Management will be permanent civilian employees. As military will
no longer perform these duties workers can concentrate on the job and not worry about time-
consuming duties that are inherently military. Furthermore, the MEO will implement a plan to
improve the function of the warehouse by installing adequate shelving and expanding the
warehouse to improve warehouse efficiency. Help Desk and Network Operations personnel will
assist Asset Management as necessary with the PC-COE software installation when new
computers arrive on-station. The Equipment Custodial Officer (ECO) will provide ADPE

Custodial Training for base. The MEO Base Software License Manager will provide annual training to Base Software License Managers.

The ECO will maintain a bench stock of computer Line Replaceable Units (LRU). The initial bench stock will be installed during the transition phase of the MEO. There will be several spare computers as a result of the new organization. The ECO will keep complete computers to form the bench stock. If a customer should require an LRU as a result of a failure, the MEO will temporarily replace the defective LRUs via the bench stock and assist the customer in ordering a replacement. Once the replacement arrives, it will be installed and the original LRU returned to bench stock. Bench stock items will be updated during computer modernization. The government holds responsibility for notifying the MEO which government resources may be disposed, and on what terms.

Multimedia duties and tasks associated with Multimedia Services are currently accomplished by contract. The MEO will continue to subcontract the Multimedia Services PRD requirements.

Publications and Forms Management has no major changes in workload or process procedures for publishing, forms management, or training. The responsibility for the 81st TRW Bulletin function and Base Publications Reference Library will remain with the publishing manager. The publications manager will perform aspects of publications management by developing installation publications and supplements to AF and Major Command (MAJCOM) publications for guidance and used by Keesler AFB activities to include 2nd Air Force. The forms manager will continue to analyze and evaluate necessary requirements to accomplish all program objectives, properly analyze and design all Keesler AFB Forms as is accomplished in the current organization.

3.2.1.5.2 Surge/Disaster Operations. Project Support (SC1) will lead all MEO response, assessment, and recovery actions and will develop and maintain MEO checklists in support of disaster operations. Depending on the type and extent of the disaster or surge work normal operations will be curtailed and, if necessary, overtime will be performed. The Project Support Chief, (SC1) will represent the MEO on the 81CS Unit Control Center (UCC).

The MEO will have spare equipment such as laptop computers, field telephones and telephone wire, LMRs, and cell phones. During hurricane contingencies, this equipment will be loaded into trucks for the MEO disaster team members. Vehicles will be fully fueled and scattered around the base and be available to disaster team members. Windows will be boarded. Electronic equipment such as computers, UPSs, and printers will be unplugged, placed on raised surfaces

and covered with plastic. Should base LAN communications fail, base UCCs will have dial-up
capability into the KENET server.

3.2.1.6 Hours of Operation. Project Support (SC1) will work a Compressed Work Schedule
(CWS), excluding Federal holidays, as follows: Standard Week: Monday – Thursday, 7:00 AM
– 5:00 PM; Friday, 7:00 AM – 4:00 PM; and Compressed Week: Monday – Thursday, 7:00 AM
– 5:00 PM. Services beyond these normal hours of operation will be on an on-call basis through
the Help Desk (SC1A).

3.2.1.7 Personnel Analysis. Project Support (SC1) will be staffed with 12 personnel as set forth
in Attachment 6, *MEO Personnel Analysis*. Staffing was based, in part, on the OA and SIAM as
discussed under paragraphs 3.1.2 and 3.1.4 above. The OA recommended staffing of 10.394 was
rounded to 10. Project Support was also staffed with two Quality Assurance Evaluators (QAE)
for the Multimedia subcontract, consistent with current operations.

3.2.1.8 Utilization of Subcontracts. The MEO will subcontract for: 1) multimedia services,
currently performed by K-MAR, 2) 24/7 technical support and updates/upgrades for applicable
servers (50 server licenses), currently performed by Argent, 3) annual tape library maintenance
and technical support currently performed by DLT Solutions, Inc. In addition the MEO will use
the government furnished Worldwide Integrated Digital Telecommunications Systems (WIDTS)
contract for technical assistance, depot-level repair, emergency support as needed and software
and hardware upgrade for the MSL-100.

**3.2.1.9 Utilization of Equipment (EAID, Non-EAID, ADPE, Common Hand Tools, and
Special Tools and Equipment).** Government-furnished ADPE, which consists primarily of
desktop computers/monitors, servers, printers, and laptops appear to be sufficient to meet the
needs of the MEO, as do Non-EAID, EAID, common hand tools, and special tools and test
equipment. During the joint inventory, any Government-furnished property unsuitable for its
intended use will be identified to the contracting officer. Likewise, any Government-furnished
property excess to the MEO's needs will be turned in.

The MEO has accounted for and costed equipment, materials, and supplies.

3.2.1.10 Utilization of Facilities. Project Support (SC1) will utilize the following facilities for
the following functions:

- Bldg 1101
    - MEO Chief functions

- Projects Support

- Plans and Implementation

- Pubs and Forms

- Bldg 0901

  - Hardware and Software Asset Management

- Bldg 0902

  - Multimedia Services

The Chief, Project Support (SC1) will be the facility manager for Building 1101 and the senior Multimedia QAE will be the facility manager for 0902.

3.2.1.11 Utilization of Vehicles. Project Support (SC1) will arrange for use of vehicles, when needed, through Base Communications Services (SC1C). Base Communications Services (SC1C) will manage the MEO vehicle fleet.

3.2.1.12 Utilization of Technology. The MEO will use cell phones with radio/walky-talky capability to replace pagers. Cell phones will be assigned to on-call personnel and work crews. Since pagers are one-way communicators, field technicians have to hunt for a phone to call back for information. With cell phones, however, they can immediately respond to the situation and minimize delays.

3.2.1.13 Workload Analysis. The PRD depicts historical workload data for day-to-day and surge requirements. Project Support (SC1) has been adequately staffed to respond to both on a 24/7 basis if necessary. The PRD identified the following initiative that could impact workload, however, the impact could not quantified:

- PC-COE is being fielded across Keesler AFB, therefore the number of Windows 9x and NT machines will continue to decline while the number of Windows 2000 Professional will rise.

3.2.2 Help Desk Job/Material Control (SC1A)

3.2.2.1 Barriers to Efficient and Effective Operations in the Current Organization and Proposed Improvements

Barrier	Improvement

Barrier	Improvement
Three separate Help Desk functions performing service to Keesler customers, using unnecessary manning and resources. Many times results in customer confusion about who to call and who is tracking trouble tickets.	Consolidate and centralize into one workcenter.
Too many systems/methods to submit/document work orders and trouble-tickets (Remedy Trouble Reporting software, Telecommunications Management Systems (TMS), AF Form 3215, and KAFB Form 1) spread out among several workcenters, resulting in poor coordination among workcenters, causing customer confusion and delays in processing.	Use Remedy as main work order operating system and centralize all methods under Help Desk.
Base locator function is being performed by E-5, which is a waste of manning.	Automate (automatic attendant) and move to the Help Desk.
Duplication creating network user accounts, not following proper template, and bypassing proper channels in account creation.	User account management the responsibility of one office ONLY including email. This includes creating the account, editing, and notifying the customer.

3.2.2.2 Mission Statement. Provide a single point of contact for access to proper levels of communications, computing, and networking services and the technical support essential to effectively use these services is provided in an efficient and effective manner to the 81st Training Wing and customers.

3.2.2.3 Responsibilities.

- Provide first level of troubleshooting for Base FSAs and WGMs.

- Route work order submissions and trouble calls.

- Serve as the 24/7 focal point for all matters concerning C&IT.

- Provide software assistance to Wing's core set of applications.

- Monitor Network Management and Systems Management Server (SMS) equipment.

- Provide assistance for email and network accounts.

- Provide duty phone number and organizational unit of assigned personnel to inquirers.

3.2.2.4 Organization Chart. See Attachment 5, *MEO Organization Charts*.

3.2.2.5 Concept of Operations

3.2.2.5.1 Normal Operations. The 81CS currently provides Help Desk services for communications and networks at three locations, split between two flights, located in two buildings, managed by three supervisors, and overseen by two flight commanders. The three Help Desks are:

Help Desk OSC	Flight	Bldg	Functions Supported
SCBB	Information Systems	1101	Networks
SCMJ	Mission Systems	1101	Air Traffic Control and Landing Systems (ATCALS) , Land Mobile Radios (LMR), Telephone Systems, Cable Maintenance
SCMP	Mission Systems	2801	Telephone Systems (Inside and Outside Plants are combined)

SCBB Help Desk consists of mostly military personnel and include the 3COX1 and 3C2X1 Air Force Specialty Codes (AFSC). The computer and networks help desk consists mostly of 3-level technicians, and rotate frequently with back-office support personnel as part of their skill level progression. Typically, five to seven technicians work the function during normal duty hours. A Non-Commissioned Officer (NCO) serves as Help Desk Supervisor and guides the day-to-day operations.

SCMJ Help Desk (also known as Job/Material Control) consists of one 5-level NCO detailed from any of the workcenters in the flight. After business hours functions are transferred to the SCBB Help Desk, but is still on-call. SCMJ works closely with Maintenance Support, which is not under study.

SCMP Help Desk (more commonly known as the Telephone Trouble Desk) consists of either a 3- or 5-level 2E6XX military member or a civilian employee rotated on regular basis. Like SCMJ Help Desk above, its after business hours functions are transferred to the SCBB Help Desk.

Only the military pull primary and alternate stand-by. This function handles telephone systems and most circuit outages.

The MEO will consolidate and centralize the services of the three help desks and locate this function into one office with one phone number, and under a single supervisor. The MEO Help Desk will be staffed with seven highly qualified and multi-tasked technicians with one person being the Help Desk Chief Controller. In the event of the absence of the Help Desk Chief Controller one of the Computer Assistant/Help Desk Specialists will fill the position. In contrast to the current operations, the staff will not be constantly rotated in and out of the workcenter at irregular intervals. This will lend stability and continuity between the technicians and their customers thus enabling technicians to become familiar with each customer and his/her particular needs. The current rate of personnel rotation requires constant re-training and causes customer disconnects. MEO technicians will be thoroughly versed with the layout of Keesler's communications infrastructure and will easily associate a customer with their particular part of the infrastructure. Help Desk technicians being very familiar with the day-to-day operations will be intimate with all the processes necessary to assist customers and to monitor communications increasing efficiency and customer satisfaction.

The MEO through the Help Desk will provide customers a one-stop shop to access maintenance support and services for all types of communications equipment whether it is telephones, radios, computers or procedural guidance and information. Customers will have the convenience of submitting work order requests by electronic forms via the Internet, by email, fax, hard copy, or in person.   Troubles may be reported by email, fax, or telephonically. Work orders and trouble tickets will be recorded and tracked electronically.

The Help Desk will assume Functional System Administrator (FSA) responsibilities for MEO. Duties include but are not limited to ensuring servers, workstations, peripherals, communication devices, and software are on-line and available to support MEO personnel. They will possess developed knowledge of hardware, software, and communications principles, and install, configure, and operate client/server devices. They will resolve day-to-day administrative and technical system problems for users requiring assistance within the MEO. The Help Desk will assume the FSA duties for the Interim Work Information Management System (IWIMS) which includes CEMAS, and the Automated Civil Engineering System. These duties are primarily limited to acquiring, unlocking, and resetting of user access passwords. The operation, maintenance, database management, and WGM duties to include but not limited to first level customer support, system trouble shooting, and running software upgrade/security patches, will continue to be the responsibility of the using organization. The Help Desk will assist the ECO

install PC-COE in new computers arriving on Keesler. The Help Desk will also provide
Workgroup Manager (WGM) training to the base as required.

The Help Desk provides the first level of troubleshooting to WGMs, FSAs, Telephone Control
Officers (TCO), Land Mobile Radio Managers (LMRM), and others calling for assistance, as well
as serving as the point of contact (POC) for all base communications to outside agencies. Highly
competent technicians will better assist customers and eliminate much of the workload currently
referred to "back-office" support personnel.

Network Operations (SC1B) and Base Communications Services (SC1C) will provide assistance,
back-office support, and training as required to Help Desk personnel.

The current Help Desk provides two AUTODIN/Defense Messaging Systems (DMS) technicians
24/7 and each require a Top Secret security clearance. The MEO Help Desk will operate via
minimum manning and provide one technician during non-duty hours for DMS and Help Desk
duties. At least one qualified AUTODIN/DMS Help Desk technician will be on-duty at all times.
The combined Help Desk will use the Remedy trouble ticket reporting software system, for all
jobs referred to back office. Remedy provides a trouble-ticket reporting database for historical
record and trend analysis. The Help Desk Chief will maintain a shift log used to record all
significant events. Help Desk technicians will use HP Openview, the Microsoft operating
environment, virtual network connections, log files, etc. to monitor Keesler's network. They will
be responsible for notifying on-call personnel during non-duty hours. Due to minimum manning
seven Help Desk personnel will require a Top Secret clearance to cover 24X7 because of their
access to the Message Distribution Terminal (MDT).

Day-to-day operations will include unlocking user accounts, creating user/e-mail accounts,
monitoring Keesler's network infrastructure, alerting FSAs and WGMs, TCOs and other users of
scheduled/unscheduled outages or other significant events occurring on the network or ATCALS,
troubleshooting, weather notice to airmen (NOTAMS), processing and documenting customer
trouble calls, work order requests, and coordinating problem resolution. They will manage the
CAMS database and process inputs within 24 hours of receipt. In addition, the Help Desk Chief
Controller will keep the MEO Chief apprised of significant events occurring within the
communications infrastructure.

The Help Desk will utilize, maintain, and update the database to interface with an Auto-Attendant
System to perform the Base Locator function instead of manning for the position. Those calling
to locate base personnel will interface with an Interactive Voice Response (IVR) system to

retrieve information. In addition, those with Internet capabilities already have access via Keesler's website. Please also see 3.2.2.12.

PRD Sections 7.4.3 – 7.4.4.3 and 7.4.12 enumerate the priority levels and restoral criterion that the Help Desk will follow in order to provide the best service to the users.

For example: It's after hours; the Command Post calls and reports that the base commander's DSN line is out of order in his/her quarters. That is a Priority 2 because it is a problem that affects the function of command and control operations (which is the purpose of a base telephone line in the base commander's quarters). Required response time is one hour. The Help Desk opens a trouble ticket in Remedy and accesses the Telecommunications Management Systems (TMS) database to obtain the information needed by the technician. The Help Desk notifies the on-call Cable and Outside Maintenance person, provides the necessary data and dispatches that person to the quarters. The technician arrives, troubleshoots, and corrects the problem. The technician notifies the Help Desk, which in turn notifies the Command Post. The ticket is closed and the incident is recorded into the shift log for the Help Desk Chief to read and then report to the MEO Chief as required.

3.2.2.5.2 Surge/Disaster Operations. SC1A, the Help Desk, will be the UCC focal point for the MEO. The Help Desk will have a personnel roster of those required to be called in for hurricanes, exercises, and other contingencies to include the Contamination Control Teams (CCT).   It will also develop, coordinate, and maintain plans for contingency and service restoration and implement the required checklists and directives.

Disaster Preparedness Program (DPP) includes preparation and recovery. DPP will take top priority during both man-made and natural disasters pre- thru post-capability. In a real world event, the MEO will cease all operations and focus on real-time emergency responses, until a return to normal conditions is declared. During an exercise event, the MEO will continue normal operations while supporting the exercise.

3.2.2.6 Hours of Operation. The Help Desk (SC1A) will work a combination of Keesler's CWS schedule and shifts to cover manning on a 24X7 basis with maximum participation during CWS hours of operation.

The Help Desk Supervisor will be responsible for creating the schedule and will adjust the schedule to compensate for annual leave, sick leave, emergencies, and position vacancies.

3.2.2.7 Personnel Analysis. Help Desk (SC1A) will be staffed with seven personnel as set forth in Attachment 6, *MEO Personnel Analysis*. Staffing was based on Minimum Manning as discussed in paragraph 3.1.3. to ensure 24/7 coverage. The recommended staffing of 6.0658 was rounded to 7.

3.2.2.8 Utilization of Subcontract. No subcontracts will be utilized.

3.2.2.9 Utilization of Equipment (EAID, Non-EAID, ADPE, Common Hand Tools, and Special Tools and Equipment). Government-furnished ADPE, which consists primarily of desktop computers/monitors, servers, printers, and laptops appear to be sufficient to meet the needs of the MEO, as do Non-EAID, EAID, common hand tools, and special tools and test equipment. During the joint inventory, any Government-furnished property unsuitable for its intended use will be identified to the contracting officer. Likewise, any Government-furnished property excess to the MEO's needs will be turned in.

The MEO has accounted for and costed equipment, materials, and supplies.

3.2.2.10 Utilization of Facilities. Help Desk (SC1A) operations will be performed from Building 1101.

3.2.2.11 Utilization of Vehicles. Help Desk (SC1A) will arrange for use of vehicles, when needed, through Base Communications Services (SC1C).   Base Communications Services (SC1C) will manage the MEO vehicle fleet.

3.2.2.12 Utilization of Technology. Rather than staffing for base locater responsibilities, the MEO will utilize an Auto-Attendant. Users calling to locate base personnel will interface with an Interactive Voice Response (IVR) system to retrieve information. In addition, those with Internet capabilities already have access via Keesler's website.

3.2.2.13 Workload Analysis. The PRD depicts historical workload data for day-to-day and surge requirements. Help Desk (SC1A) has been adequately staffed to respond to both on a 24/7 basis. The PRD identified the following initiatives that could impact workload, however, the impact could not be quantified:

- PC-COE is being fielded across Keesler AFB, therefore the number of Windows 9x and NT machines will continue to decline while the number of Windows 2000 Professional will rise.

- Domain/server consolidation is currently underway at Keesler AFB, therefore the number of servers is declining, but the number of servers under control of the 81CS will increase.

As these servers migrate to the central server farm, they will be maintained as all other servers. That is, the Air Education and Training Command (AETC) Network Operations Security Center (NOSC) will remotely administer those servers; however, touch maintenance may be required on those servers.

- Keesler AFB is migrating to Windows 2000 Server/Advanced Server, therefore the number of Windows NT machines is expected to decline.

- AETC is currently reengineering the base Network Control Centers (NCC) command-wide. The goal of the AETC NCC Reengineering initiative is to implement a NOSC centric enterprise network within AETC. The NOSC centric network will standardize and streamline network operations throughout the command. AETC NOSC has the authority to direct standardized network configurations, restoration of network services, patching of security vulnerabilities, and coordinate the response to network outages or intrusion attempts.

3.2.3 Network Operations (SC1B)

3.2.3.1 Barriers to Efficient and Effective Operations in the Current Organization and Proposed Improvements

Barrier	Improvement
Barriers to efficient and effective operations include excessive layers of management which frustrates the processes causing delays, wasted and misdirected manpower, and customer confusion as to who is responsible for what resulting in customer run-around. The "networks" side of the house consists of numerous 3-level trainees, performing a multitude of tasks in addition to upgrade training. One workcenter had as many as twelve 3-levels at any given time.	Minimize/streamline managerial levels. The three major networking functions will be consolidated into a single workcenter with one supervisor reporting directly to the MEO Chief (SC1). In addition, the staffing of the MEO with a fully qualified, stable civilian workforce will eliminate the non-productivity associated with apprentice-level positions.
There are only a handful of highly skilled technicians that actually maintain the network infrastructure including engineering, testing, troubleshooting, upgrading, coordinating, directing, etc. Their time is divided between maintaining the network, supervising and training a lop-sided number of unskilled technicians, and trying to remain proficient as technology rapidly changes.	The three major networking functions will be consolidated into a single workcenter with one supervisor reporting directly to the MEO Chief. Utilizing an all civilian, stable workforce will eliminate the non-productivity associated with apprentice-level positions. Technicians will be able to concentrate on the job instead of on supervising and training.

Barrier	Improvement
Cable installation of LAN cables being performed by two or three workcenters. Duplication of effort. Gray lines of responsibility.	Shift all LAN cable installation to Cable/Outside Plant in Base Communications Services (SC1C).
Duplication in creating network user accounts, not following proper template, and bypassing proper channels in account creation.	SC1B will manage all network user accounts. The Help Desk (SC1A) will create and edit accounts, then notify customers under the guidance of SC1B.
Web development function requires too many levels of authority in updating Web content and enforcing standards. Military personnel performing the Web development function have no formal training and are not provided any.	Staff with a web development specialist and eliminate levels of authority by streamlining the organization.

3.2.3.2 Mission Statement. Provide network management, electronic mail, web services, network monitoring and analysis, and information protection of the base Metropolitan Area Network (MAN).

3.2.3.3 Responsibilities.

- Administer and manage Computer Security (COMPUSEC), Emissions Security (EMSEC), Information Assurance (IA), Communications Security (COMSEC), Air Force Electronic Key Management System (AFEKMS), B-ORA, Secure Telephone Unit-III (STU-III), Secure Telephone Equipment (STE), and Telecommunications Monitoring Assessment Program (TMAP).

- Research and provide technical guidance on the purchase of network components.

- Maintain, install, upgrade, and operate data network systems.

- Install, operate, and maintain support of current software.

- Operate and maintain base level servers including e-mail, SMS, and Active Directory for W2K.

- Provide web development and maintenance of all elements of Keesler's restricted and development sites to include MS/SQL.

- Provide training to base web maintainers.

- Submit inputs to the unit plans function for statement of work development.

- Provides support for remote distributed print services.

3.2.3.4 Organization Chart. See Attachment 5, *MEO Organization Charts*.

3.2.3.5 Concept of Operations

3.2.3.5.1 Normal Operations. Network Operations will provide Operations and Maintenance (O&M) functions, including security, with the assistance of AETC NOSC for all systems connected to Keesler's network infrastructure. This also includes stand-alone systems and LANs such as KENET and the base library LAN.

Network Operations personnel will specialize in one of four major areas of responsibility that comprise Keesler's network infrastructure and will report to a single supervisor, the Network Operations Chief. In the event of the absence of the Network Operations Chief either the Information Technology Specialist supervisor from Network Services or Systems Administration will fill in. Areas of responsibility will be broken down into activities as follows:

- **Network Management (NM)** performs O&M functions on infrastructure equipment such as routers, switches, hubs, network interface cards (NIC), etc. NM will utilize network performance tools to monitor, analyze, and optimize network performance.

- **Network Administration (NA)** performs O&M activities on network servers, standalone servers, and workstation hardware and software. Manages all domain user and e-mail accounts, and serves as Remedy database administrator.

- **Network Security (NS)** will be responsible for all base security programs including, but not limited to COMSEC, COMPUSEC, EMSEC, and IA. NS is responsible for Certification and Accreditation (C&A) of systems, and manages Time Compliance Network Orders (TCNO) compliance for the base.

- **Internet Services (IS)** encompasses all duties pertaining to base Internet and Intranet including Web Development, O&M of public and restricted web servers, postings of Web content, 508 compliance, assisting web developers, monitoring web server performance and security, managing the Web Review Board, and monitoring Internet Release Packages (IRP).

Network Operations will be staffed with highly qualified technicians reporting to one supervisor, thus eliminating many layers of supervision and vastly improving lateral communication to provide the Help Desk and the customer a more direct approach in problem resolution. Network Operations will provide "back-office" support to the Help Desk by working closely with Help

Desk technicians, the Chief controller, and the customer through direct interaction. Network Operations will not only use Remedy for documenting outages but also to document any significant action performed by the workcenter including, installations, upgrades, TCNO compliance, and customer service calls. This will enable the Network Operations Chief to maintain a thorough historical record for reference and trend analysis to assist in identifying areas requiring improvement.

Network Operations, guided by the AETC NOSC, will provide "touch-maintenance" on NOSC core services including, but not limited to: Domain Naming Services (DNS), Dynamic Host Control Protocol (DHCP), file, e-mail, application servers, and web services. The workcenter will be responsible for the "first 400 feet" of network connectivity to the base network backbone. Network Operations will provide initial installation and configuration of network servers, routers, switches, hubs, repeaters, servers, workstations, printers, and other related peripheral devices. They will assist FSAs and WGMs as necessary. Additionally, Network Operations will provide software installation services including e-mail, InfoConnect, Transmission Control Protocol/Internet Protocol (TCP/IP) and install TCNO patches to applicable nodes. Personnel will test and validate new software operating systems, application software, security patches, and upgrades. Furthermore, technicians will assist customers and provide solutions in determining requirements for existing and new installations.

Network Operations will perform scheduled and unscheduled maintenance based on manufacturer recommendations. One normal off-duty day per month will be designated to perform scheduled maintenance to minimize impact on customer. The workcenter will try to schedule downtime around normal duty hours.

Network Operations will provide an on-call technician after normal duty hours including nights, CWS Fridays, holidays, and weekends. Individuals will rotate the on-call position. Scheduling will be set 90 days in advance to accommodate leave and emergencies. An alternate will also be scheduled in case the primary is unavailable. On-call personnel will carry a cell phone and the Network Operations Chief will also be notified when on-call personnel are contacted.

Network Management will be proactive in monitoring, troubleshooting, and optimizing network performance from end-user node to Information Transfer Node (ITN) through the use of network performance tools including HP Openview, SolarWinds, and network/protocol analyzers. Technicians will work closely with AETC NOSC, local and distant support agencies, FSAs/WGMs, and contractors to isolate faults, provide temporary workarounds, make repairs, and restore service. The Network Operations Chief will ensure technicians maintain and update

network maps, Internet Protocol (IP) scopes, FSA/WGM rosters, etc., as these additional resources will minimize time expended in fault isolation efforts.

The Network Administration function provides a single point of control for network access and account creation to ensure network integrity and standardize the manner in which accounts are created, thus eliminating mistakes and ensuring proper coordination. Network Administration manages all domain accounts and provides guidance and assistance to the Help Desk in creating accounts, assigning permissions to users, and determining network permissions for all administrators and end-users for the domain. Two Remedy administrators will be designated as primary and alternate and will maintain the Remedy database for the MEO. Administration includes setting up accounts, assigning permissions, performing database back-ups, fault isolation, and generating reports and remote distributed print services.

Network Security includes all activities related to administration and management of the following programs: COMSEC, COMPUSEC, EMSEC, IA, AFEKMS, STU-III, STE, and TMAP. Network Security also manages C&A of all base computer systems and networks and all TCNOs downward directed from AETC NOSC. Network Security will update Action Tracker and ensure all activities meet TCNO compliance. Network Security also provides training in the following areas: COMPUSEC manager, COMSEC Responsible Officer, EMSEC Monitor, and FORTEZZA Security. Network Security will maintain a historical record of all network and system accreditation packages and ensure all systems meet Air Force and local security requirements and have appropriate Designated Approval Authority (DAA) approval before connecting to the base network infrastructure. Furthermore, Network Security performs the Bi-annual Information Assurance and Awareness Program (IAAP) Assessment and EMSEC Countermeasure Assessments. Network Security works with the Information Protection Office (IPO) (which is not under study) to identify computers with weak security configurations, vulnerabilities, and when systems have been accessed, exploited, or destroyed by unauthorized persons or machines. Finally, Network Security will maintain and administer security clearances for MEO personnel.

Internet Services will provide web services to Keesler. Services include, but are not limited to ensuring 508 compliance of the American with Disabilities Act of all web content through the use of Bobby software, monitoring and optimizing web server performance, and uploading Web pages from the temporary side to the "hot-side" of the server. Furthermore, Internet Services will provide assistance and training to base web administrators, make recommendations to management to improve service and web content, ensure IRPs are routed and approved through

appropriate workcenters throughout Keesler, and administer the annual Web Review Board. In addition, Internet Services will provide O&M on related equipment such as CacheFlow Proxy servers and assist AETC NOSC with DNS and DHCP services. All Information Technology Specialists are interchangeable and can fill in during the absence of the supervisors of either Network Services or Systems Administration. The web developer's absence can be filled in by any of the Network Services/Customer Support Information Technology Specialists.

3.2.3.5.2 Surge/Disaster Operations. Network Operations (SC1B) will support all MEO response, assessment, and recovery actions necessary to restore all mission essential network operations. Depending on the type and extent of the disaster or surge work normal operations will be curtailed and if necessary overtime will be performed.

The MEO will have spare equipment such as laptop computers, field telephones and telephone wire, LMRs, and cell phones. During hurricane contingencies, this equipment will be loaded into trucks for the MEO disaster team members. Vehicles will be fully fueled and scattered around the base and be available to disaster team members. Windows will be boarded. Electronic equipment such as computers, UPs, and printers will be unplugged, placed on raised surfaces and covered with plastic. Should base LAN communications fail, base UCCs will have dial-up capability into the KENET server.

3.2.3.6 Hours of Operation. Network Operations (SC1B) will work a CWS, excluding Federal holidays, as follows: Standard Week: Monday – Thursday, 7:00 AM – 5:00 PM; Friday, 7:00 AM – 4:00 PM; and Compressed Week: Monday – Thursday, 7:00 AM – 5:00 PM. In addition, a technician will work from 3:00 PM – 12:00 midnight on each duty day. Services beyond these hours of operation will be on an on-call basis through the Help Desk (SC1A). One or two technicians will work the training CWS schedule as follows: Standard Week: Monday – Thursday, 6:00 AM – 4:00 PM, Friday; 6:00 AM – 3:00 PM; and Compressed Week: Monday – Thursday, 6:00 AM – 4:00 PM.

Network Operations (SC1B) will schedule employees for downtime, routine maintenance, upgrades, installations, etc., as required (typically the third Sunday of each month) to minimize disruption to the 81st Training Wing and customers.

3.2.3.7 Personnel Analysis. Network Operations (SC1B) will be staffed with 10 personnel as set forth in Attachment 6, *MEO Personnel Analysis*. Staffing was based on the OA and SIAM as discussed under paragraphs 3.1.2 and 3.1.4 above. The OA recommended staffing of 9.8193 was rounded to 10.

- Personnel to be multi-skilled:

- GS-2210-09 Information Technology Specialist (Security)/Wing Assist and Information Assurance Manager will be multi-skilled in telecommunications security.

- Personnel to be cross-utilized:

- Circuit Actions Technicians will be cross-utilized in inside/outside plant telephone and network management to fill in during surge work and contingencies.

3.2.3.8 Utilization of Subcontracts. No subcontracts utilized.

3.2.3.9 Utilization of Equipment (EAID, Non-EAID, ADPE, Common Hand Tools, and Special Tools and Equipment). Government-furnished ADPE, which consists primarily of desktop computers/monitors, servers, printers, and laptops appear to be sufficient to meet the needs of the MEO, as do Non-EAID, EAID, common hand tools, and special tools and test equipment. During the joint inventory, any Government-furnished property unsuitable for its intended use will be identified to the contracting officer. Likewise, any Government-furnished property excess to the MEO's needs will be turned in.

The MEO has accounted for and costed equipment, materials, and supplies.

3.2.3.10 Utilization of Facilities. Network Operations (SC1B) will be conducted from Building 1101. In addition, servers supporting the Civil Engineering Squadron will be housed in the computer room in Building 4705 for which the Network Operations Chief (SC1B) will be the facility manager (for the computer room only).

3.2.3.11 Utilization of Vehicles. Network Operations (SC1B) will arrange for use of vehicles, when needed, through Base Communications Services (SC1C).   Base Communications Services (SC1C) will manage the MEO vehicle fleet.

3.2.3.12 Utilization of Technology. The MEO will use cell phones with radio/walky-talky capability to replace pagers. Cell phones will be assigned to on-call personnel and work crews. Since pagers are one-way communicators, field technicians have to hunt for a phone to call back for information. With cell phones, however, they can immediately respond to the situation and minimize delays.

There are several technologies, though not a part of this MEO, that, if implemented through IT modernization, could impact Network Operations (SC1B):

- Wireless technology in non-secure environments. At present, security is an issue but industry is forecasting improvements in the near future.

- Voice over Internet Protocol (VoIP).

- Virtual Private Network (VPN) – provides the technician and other potential users remote access into the Keesler LAN. Application is similar to current dial-in access; however, off-site users with broadband Internet access will be able to access resources on the network for monitoring/troubleshooting at much higher speeds.

3.2.3.13 Workload Analysis. The PRD depicts historical workload data for day-to-day and surge requirements. Network Operations (SC1B) has been adequately staffed to respond to both on a 24/7 basis if necessary. The PRD identified the following initiatives that could impact workload, however, the impact could not be quantified:

- PC-COE is being fielded across Keesler AFB, therefore the number of Windows 9x and NT machines will continue to decline while the number of Windows 2000 Professional will rise.

- Domain/server consolidation is currently underway at Keesler AFB, therefore the number of servers is declining, but the number of servers under control of the 81CS will increase. As these servers migrate to the central server farm, they will be maintained as all other servers. That is, the AETC NOSC will remotely administer those servers; however, touch maintenance may be required on those servers.

- Keesler AFB is migrating to Windows 2000 Server/Advanced Server, therefore the number of Windows NT machines is expected to decline.

- AETC is currently reengineering the base NCC command-wide. The goal of the AETC NCC Reengineering initiative is to implement a NOSC centric enterprise network within AETC. The NOSC centric network will standardize and streamline network operations throughout the command. AETC NOSC has the authority to direct standardized network configurations, restoration of network services, patching of security vulnerabilities, and coordinate the response to network outages or intrusion attempts.

3.2.4 Base Communications Services (SC1C)

3.2.4.1 Barriers to Efficient and Effective Operations in the Current Organization and Proposed Improvements

Barrier	Improvement
Barriers to efficient and effective operations include excessive layers of management which frustrates the processes causing delays, wasted and misdirected manpower, and customer confusion as to who is responsible for what resulting in customer run-around. The Mission Systems Flight consists of numerous 3-level trainees, performing a multitude of tasks in addition to upgrade training.	Minimize/streamline managerial levels. In addition, the staffing of the MEO with a fully qualified, stable civilian workforce will eliminate the non-productivity associated with apprentice-level positions.
Communications with workers and work crews is impeded by the use of pagers, which are one-way communicators. Personnel waste time hunting for the nearest available phone in order to acknowledge the page and to ask for pertinent details needed to perform the required task.	Real time communication will be utilized instead of pagers. The cell phones will be programmed with different rings for levels of priority. This will eliminate delays in technician response times because of a pager's limitations.
There is no training program in place to train TCOs in their responsibilities resulting in disconnects between customers and the communications squadron.	Implement a training program for TCOs to address initial and refresher training.
Ill-equipped and stocked utility vehicles. Workers/work crews frequently have to return to the workcenter to retrieve tools and materials that they forgot or didn't anticipate needing. When this occurs, it wastes an average of about ten minutes per hour because someone must return to the workcenter to get the missing items.	Utility vehicles will be stocked with standard parts and equipment, all of which will be replaced at the end of each day. Parts will be accounted for by job and equipment will be signed in and out (color code tools).
Circuit Actions (CA) long-haul is split between two workcenters. Vendors perform upgrades or service changes without CA knowledge, resulting in inadequate records and difficulty in troubleshooting and identifying circuits.	Combine workcenters into one. This will force vendors to coordinate with one workcenter and prevent unnoticed task performance.
Cable installation of LAN cables being performed by multiple workcenters. Duplication of effort. Gray lines of responsibility.	Shift all LAN cable installation and maintenance to Cable/Outside Plant.
Due to "mission creep," cell phone requests are split between several offices causing inefficiency in processing requests.	Centralize approval authority.

3.2.4.2 Mission Statement. Provide effective installation, maintenance, management, and technical support for voice and data communications, base fiber optic and copper cable infrastructure, and land mobile radio systems to the 81st Training Wing and Keesler AFB.

3.2.4.3 Responsibilities.

- Maintain, install, and repair LMR equipment, paging systems, and cell phone accounts.

- Manage frequency assignments.

- Maintain hardware and software for the MSL100/200.

- Maintain fiber optic and copper cable plants.

- Install and maintain all LAN drops and telephones.

- Troubleshoot long haul communications that traverse the Integrated Digital Network Exchange (IDNX).

3.2.4.4 Organization Chart. See Attachment 5, *MEO Organization Charts*.

3.2.4.5 Concept of Operations

3.2.4.5.1 Normal Operations. Base Communications Services (SC1C) will consist of Telephone Switching Systems Maintenance, Cable and Outside Maintenance, Circuit Actions, and Land Mobile Radio. Together, they will provide O&M functions for long distance (Federal Telecommunications Service (FTS) and DSN) and local (on and off-base) telephone service; maintenance of the base-wide copper and fiber optic cable infrastructure; local and long-haul circuits; LMRs, paging systems, cell phone management, and frequency spectrum management.

Base Communications Services personnel specialize in one of four major areas of responsibility and will report to a single supervisor, the Base Communications Services Chief (SC1C). In the event of absence, this position will be filled by the Communications Cable Splicer leader. Areas of responsibility will be broken down into activities as follows:

- **Switch Maintenance** performs O&M functions on the MSL100 to monitor, analyze, and optimize digital computerized switch performance.

- **Cable and Outside Maintenance** performs O&M activities to provide base wide copper and fiber optic cable infrastructure, LAN wiring, and telephone instruments.

- **Circuit Actions** manages and performs O&M duties for all local and long-haul circuits.

- **Land Mobile Radio (LMR)** has the O&M responsibility for LMRs and paging systems. LMR also manages the cell phone support and the frequency spectrum.

Base Communications Services (SC1C) consists of highly qualified technicians reporting to one supervisor, thus eliminating several layers of supervision and vastly improving lateral

communication to provide the customer a more direct approach in problem resolution. The MEO will follow the industry standard of one-person work crews, unless the situation dictates two-person integrity, i.e., confined space such as manholes. Base Communications Services (SC1C) will use Remedy for documenting outages and other customer service calls throughout the MEO. TMS, being integral to the MSL100, will be used by Switch Maintenance. Tracking Reporting System (TRS) will be used by LMR to track inventory. TRS is utilized at MAJCOM level. This will enable the Chief, Base Communications Services (SC1C) to maintain a thorough historical record for reference in trend analysis and to assist in identifying areas requiring improvement.

Base Communications Services (SC1C) will perform scheduled and unscheduled maintenance based on manufacturer recommendations. The workcenter will try to schedule downtime around normal duty hours. System upgrades will be performed after business hours to minimize impact on the customer.

Switch Maintenance personnel will be responsible to maintain the MSL 100 and its remote at the hospital. The current workcenter combines Inside and Outside Telephone and is staffed with six civilians (one supervisor, five journeymen) and 15 military. These figures break down to three civilians and five military for Outside Telephone and three civilians and ten military for Inside Telephone. The MEO will consist of two journeymen. This reduced manning will greatly enhance operational efficiency because all of the functions inherent to military personnel will be eliminated as well as training workload associated with 3-level positions allowing for a much smaller work force. In addition, the Outside Plant will be combined with Cable Maintenance to form Cable and Outside Maintenance for greater efficiency and a better matching of skills. Among the maintenance duties to be performed are Preventive Maintenance Inspections (PMI) on hardware and software, monitoring and analyzing system reports for trends and functionality, and database management. Also included is emergency call tracing, responding to and correcting all alarms, Helmsman updates, operator console troubleshooting, database management for FTS billing, and administration of the Telephone Control Office (TCO) program. Additionally, will provide base operators data for inclusion into the base phone book and telephone information to the Wing Public Affairs office for Keesler AFB Military Directory. To minimize outages, unique systems and services will be proactively maintained. These include, but are not limited to, E911, conferencing equipment, Primary and Secondary Crash Nets, Keesler Alert Net (KAN), and other dedicated systems. And to ensure that the MSL100 is continually updated, technology refreshments will be performed which includes translations for new trunk service, new circuit packs, configuration management, and database administration.

Cable and Outside Maintenance function will combine Cable Maintenance and Outside Plant Telephone. Since Keesler is a "single-line concept" base, there are no telephone key systems to be maintained. As a result, outside maintenance personnel only need to be skilled to install and maintain wiring, jacks, and digital and single line telephones. However, to best utilize manpower, the technicians will follow the industry standard of one-person work crews unless the situation dictates two-person integrity.

Their combined responsibilities will include the outside plant duties mentioned above, plus the maintenance of the base wide copper and fiber optic cable plant, as well as the installation and maintenance of LAN wiring, terminals, and new cabling into buildings. Cable and Outside Maintenance will process requests for digging permits and will also access damaged or cut cables for responsibility and repairs. For new installations, cable pair testing and tagging will be performed. The technicians will also install and maintain base telephone service in the DV TLF. Their duties include assisting the local telephone company and the base housing office's contractor in trouble shooting outages. Upon request, they will provide telephone and wire support to Air National Guard (ANG) Base located in Gulfport, MS. A work leader will manage the MEO vehicle fleet because approximately 80% of the utilization will be by this workcenter.

Circuit Actions personnel will manage all local and long-haul circuits. The two technicians will coordinate with base customers, pertinent agencies, and commercial vendors to install, remove, or repair dedicated and specialized circuits. Circuit Actions will validate requirements for new service, provide timely and responsive action to restore outages, especially for critical circuits, and perform crypto updates. Circuit Actions technicians will serve as primary and alternate Defense Information Support Network (DISN) Node Site Coordinators, provide "touch maintenance" on Keesler's Air Force Internet Node (AFIN) router, IDNX, and Secret Internet Protocol Router Network (SIPRNET) nodes, O&M of all long-haul copper and fiber optic modems, maintain and administer the FaCIT database for long-haul communications and an up-to-date hard copy of all circuit history folders.

Land Mobile Radio (LMR) personnel will manage and maintain the LMR networks, paging systems, and cell phone support. LMR will provide reliable wireless voice communications for its customers. The technician will review and provide technical solutions to customer requests, provide frequency management for all radio systems, conduct LMR manager training, and ensure that the compatibility of C4 systems with existing equipment will not adversely impact the Radio Frequency (RF) spectrum. The office where LMR is currently located will not be available to the MEO therefore it will be moved from 1101 to 2801 in order to be co-located with the other Base

Communications Services (SC1C) functions. In the event of an absence of the personnel filling position, duties will be accomplished by the Communications Services supervisor.

3.2.4.5.2 Surge/Disaster Operations.

Base Communications Services (SC1C) will support all MEO response, assessment, and recovery actions necessary to restore all mission essential network operations on a 24/7 basis.

The MEO will have spare equipment such as laptop computers, field telephones and telephone wire, LMRs, and cell phones. During hurricane contingencies, this equipment will be loaded into trucks for the MEO disaster team members. Vehicles will be fully fueled and scattered around the base and be available to disaster team members. Windows will be boarded. Electronic equipment such as computers, UPSs, and printers will be unplugged, placed on raised surfaces and covered with plastic. Should base LAN communications fail, base UCCs will have dial-up capability into the KENET server.

Bldg 2801 is certified up to a Category 2 hurricane. On-call personnel for Switch Maintenance, Cable and Outside Maintenance, Circuit Actions, and LMR can shelter in this building until a Category 3 is declared.

Disaster preparation and recovery will take top priority during both man-made and natural disaster pre thru post capability. In a real world event, the MEO will cease all operations and focus on real-time emergency responses, until a return to normal conditions is declared. During an exercise event, the MEO will continue normal operations while supporting the exercise.

3.2.4.6 Hours of Operation. Base Communications Services (SC1C) will work a CWS, excluding Federal holidays, as follows: Standard Week: Monday – Thursday, 7:00 AM – 5:00 PM; Friday, 7:00 AM – 4:00 PM; and Compressed Week: Monday – Thursday, 7:00 AM – 5:00 PM. Services beyond these hours of operation will be on an on-call basis through the Help Desk (SC1A).

3.2.4.7 Personnel Analysis. Base Communications Services (SC1C) will be staffed with 13 personnel as set forth in Attachment 6, *MEO Personnel Analysis*. Staffing was based on the OA and SIAM as discussed under paragraphs 3.1.2 and 3.1.4 above. The OA recommended staffing of 13.1888 was rounded to 13.

Personnel who will be multi-skilled:

- WL/WG-2504-08/10 Cable and Outside Maintenance will be multi-skilled in inside/outside plant telephone.

- WG-2504-08 will be multi-skilled in heavy equipment operation.

Personnel to be cross-utilized:

- WG-2502-11 Telephone Systems Journeymen will be cross-utilized in outside plant telephone and circuit actions maintenance to fill in during surge work and contingencies.

- WG-2502-11 Circuit Actions Technicians will be cross-utilized in inside/outside plant telephone and network management to fill in during surge work and contingencies.

- WS-2504-09 Base Communications Services Supervisor will be cross-utilized in basic switch maintenance and LMR to fill in during surge work and contingencies.

3.2.4.8 Utilization of Subcontracts. Base Communications Services (SC1C) will not require the use of any subcontracts.

3.2.4.9 Utilization of Equipment (EAID, Non-EAID, ADPE, and Common Hand Tools and Special Tools and Equipment). Government-furnished ADPE, which consists primarily of desktop computers/monitors, servers, printers, and laptops appear to be sufficient to meet the needs of the MEO, as do Non-EAID, EAID, common hand tools, and special tools and test equipment. During the joint inventory, any Government-furnished property unsuitable for its intended use will be identified to the contracting officer. Likewise, any Government-furnished property excess to the MEO's needs will be turned in.

The MEO has accounted for and costed equipment, materials, and supplies.

3.2.4.10 Utilization of Facilities. Base Communications Services (SC1C) will utilize Building 2801 for the following functions:

- Switch Maintenance

- Land Mobile Radio

- Cable/Outside Maintenance

- Circuit Actions

The remote switch is housed in Building 0468 (Hospital) and repeaters for the LMR system will be in Building 1928, which is a small, unmanned facility.

The Base Communications Services Chief (SC1C) will be the facility manager for Buildings 2801 and 1928.

3.2.4.11 Utilization of Vehicles. Ten vehicles have been identified as Government-furnished property.

Registration Number	Vehicle Type	Approximate Vehicle Age At Transition (2005)	Approximate Vehicle Age At Contract Renewal (2015)	Remarks
97C280	Trk Maint Tel	8 Years	18 Years	
95B319	P/U CMPT	10 Years	20 Years	
97B2005	P/U CMPT	8 Years	18 Years	
88C1348	Trk Maint Tel	17 Years	27 Years	
88C1347	Trk Maint Tel	17 Years	27 Years	
88C167	Trk Maint Tel	17 Years	27 Years	
83C918	Trk Maint Tel	22 Years	N/A	
93C588	Trk Maint Tel	12 Years	22 Years	
92C82	Trk Maint Tel	13 Years	23 Years	
95B317	P/U CMPT	10 Years	20 Years	

Base Communications Services (SC1C) will manage the MEO vehicle fleet since 80% of the utilization will be from this workcenter. The workcenter work leader will be the Vehicle Control Officer (VCO) for the MEO. VCO responsibilities are to track the AF Forms 1800, control vehicle usage, perform monthly vehicle inspections and ensure vehicles are turned in for scheduled/unscheduled maintenance. Technicians requiring continual vehicle use will be assigned a vehicle and will be responsible for the daily inspections, safety, and upkeep. Technicians will be responsible for turning in AF Forms 1800 to the VCO monthly. Vehicles will be maintained and repaired by the motor pool.

3.2.4.12 Utilization of Technology. The MEO will use cell phones with radio/walky-talky capability to replace pagers. Cell phones will be assigned to on-call personnel and work crews. Since pagers are one-way communicators, field technicians have to hunt for a phone to call back for information. With cell phones, however, they can immediately respond to the situation and minimize delays.

There are several technologies, though not a part of this MEO, that, if implemented through IT modernization could impact Base Communications Services (SC1C):

- Possible regionalization of the Air Force's telephone switches. This has been an industry standard for quite some time.   The Air Force's approach has been to follow industry's lead as much as possible.

- Voice Over Internet Protocol (VoIP).

- Voice Mail (VM).

3.2.4.13 Workload Analysis. The PRD depicts historical workload data for day-to-day and surge requirements. Base Communications Services (SC1C) has been adequately staffed to respond to both on a 24/7 basis if necessary.